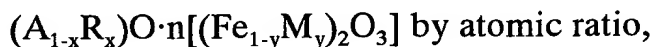


WHAT IS CLAIMED IS:

1. A ferrite magnet having a basic composition represented by the following general formula:



5 wherein A is Sr and/or Ba, R is at least one of rare earth elements including Y, M is at least one element selected from the group consisting of Co, Mn, Ni and Zn, and x, y and n are numbers meeting the following conditions:

$$0.01 \leq x \leq 0.4,$$

$$[x/(2.6n)] \leq y \leq [x/(1.6n)], \text{ and}$$

10 $5 \leq n \leq 6,$

said ferrite magnet substantially having a magnetoplumbite-type crystal structure, the R element and/or the M element being added in the form of a compound at a pulverization step after calcination.

2. The ferrite magnet according to claim 1, wherein said R element is
15 at least one element selected from the group consisting of La, Nd, Pr and Ce.

3. The ferrite magnet according to claim 2, wherein La is an indispensable element.

4. The ferrite magnet according to claim 3, wherein said R element is
20 only La.

5. The ferrite magnet according to ~~any one of claims 1-4~~¹, wherein said M element is only Co.

6. The ferrite magnet according to ~~any one of claims 1-4~~¹, wherein said M element is Co plus Mn and/or Ni, the amount of Mn being 0.4 atomic %
25 or more, if any.

a 7. The ferrite magnet according to ~~any one of claims 1-4~~^{claim 1}, wherein said M element is Ni and/or Mn, the amount of Mn being 0.4 atomic % or more, if any.

a 8. The ferrite magnet according to ~~any one of claims 1-7~~^{claim 1}, wherein said
5 R element and/or said M element is added in the form of an oxide or a hydroxide.

a 9. The ferrite magnet according to ~~any one of claims 1-8~~^{claim 1}, wherein an iron compound is further added at a fine pulverization step after calcination.

10 10. The ferrite magnet according to claim 9, wherein the amount of said iron compound ~~post-added~~^{further added} is 0.1-11 weight %, on an iron element basis, per the total amount of iron.

a 11. The ferrite magnet according to ~~any one of claims 1-10~~^{claim 1}, wherein the concentration of said R element is higher in crystal grain boundaries than in
15 said magnetoplumbite-type crystal grains.

a 12. The ferrite magnet according to ~~any one of claims 1-14~~^{claim 1}, wherein said R element is La, and said M element is Co, and wherein said ferrite magnet has a residual magnetic flux density Br of 4,100 G or more, a coercivity iHc of 4,000 Oe or more, and a squareness ratio Hk/iHc of
20 92.3% or more at 20°C.

a 13. The ferrite magnet according to ~~any one of claims 1-14~~^{claim 1}, wherein said R element is La, and said M element is Co plus Mn and/or Zn, and wherein said ferrite magnet has a residual magnetic flux density Br of
25 ratio Hk/iHc of 93.5% or more at 20°C.

14. A ferrite magnet having a basic composition represented by the following general formula:

$(A_{1-x}R_x)O \cdot n[(Fe_{1-y}M_y)_2O_3]$ by atomic ratio,

wherein A is Sr and/or Ba, R is at least one of rare earth elements including Y, M is at least one element selected from the group consisting of Co, Mn, Ni and Zn, and x, y and n are numbers meeting the following conditions:

$$0.01 \leq x \leq 0.4,$$

$$[x/(2.6n)] \leq y \leq [x/(1.6n)], \text{ and}$$

$$5 \leq n \leq 6,$$

said ferrite magnet substantially having a magnetoplumbite-type crystal structure, the R element and/or the M element being added in the form of a compound both at a mixing step before calcination and at a pulverization step after calcination.

15. The ferrite magnet according to claim 14, wherein said R element is at least one element selected from the group consisting of La, Nd, Pr and Ce.

16. The ferrite magnet according to claim 15, wherein La is an indispensable element.

17. The ferrite magnet according to claim 16, wherein said R element is only La.

18. The ferrite magnet according to ~~any one of claims 14-17~~¹⁴, wherein said M element is only Co.

19. The ferrite magnet according to ~~any one of claims 14-17~~¹⁴, wherein said M element is Co plus Mn and/or Ni, the amount of Mn being 0.4

atomic % or more, if any.

20. The ferrite magnet according to ~~any one of claims 14-17~~, wherein said M element is Ni and/or Mn, the amount of Mn being 0.4 atomic % or more, if any.

21. The ferrite magnet according to ~~any one of claims 14-20~~, wherein said R element and/or said M element is added in the form of an oxide or a hydroxide.

22. The ferrite magnet according to ~~any one of claims 14-21~~, wherein an iron compound is further added at a fine pulverization step after calcination.

23. The ferrite magnet according to ~~any one of claims 14-22~~, wherein the amount of said R element and/or said M element post-added is 20 atomic % or more and less than 100 atomic % per the total amount of said R element and/or said M element.

24. The ferrite magnet according to claim 22, wherein the amount of said iron compound ^{further added} ~~post-added~~ is 0.1-11 weight %, on an iron element basis, per the total amount of iron.

25. The ferrite magnet according to ~~any one of claims 14-24~~, wherein the concentration of said R element is higher in crystal grain boundaries than in said magnetoplumbite-type crystal grains.

26. The ferrite magnet according to ~~any one of claims 14-25~~, wherein said R element is La, and said M element is Co, and wherein said ferrite magnet has a residual magnetic flux density Br of 4,100 G or more, a coercivity iHc of 4,000 Oe or more, and a squareness ratio Hk/iHc of 92.3% or more at 20°C.

27. The ferrite magnet according to ~~any one of claims 14-25~~, wherein

said R element is La, and said M element is Co plus Mn and/or Zn, and wherein said ferrite magnet has a residual magnetic flux density Br of 4,200 G or more, a coercivity iHc of 3,000 Oe or more, and a squareness ratio Hk/iHc of 93.5% or more at 20°C.

- 5 28. A method for producing a ferrite magnet having a basic composition represented by the following general formula:

$(A_{1-x}R_x)O \cdot n[(Fe_{1-y}M_y)_2O_3]$ by atomic ratio,

wherein A is Sr and/or Ba, R is at least one of rare earth elements including Y, M is at least one element selected from the group consisting of Co, Mn,

- 10 Ni and Zn, and x, y and n are numbers meeting the following conditions:

$$0.01 \leq x \leq 0.4,$$

$$[x/(2.6n)] \leq y \leq [x/(1.6n)], \text{ and}$$

$$5 \leq n \leq 6,$$

- 15 said ferrite magnet substantially having a magnetoplumbite-type crystal structure, said method comprising the steps of uniformly mixing a compound of Sr and/or Ba with an iron compound; calcining the resultant mixture; adding the R element and/or the M element in the form of a compound to the resultant calcined powder at a pulverization step thereof; and sintering the resultant mixture.

- 20 29. The method for producing a ferrite magnet according to claim 28, wherein at least one of oxides or hydroxides of elements selected from the group consisting of La, Nd, Pr and Ce is added as said R element compound.

- a 30. The method for producing a ferrite magnet according to claim 28 or

- a 25 ~~29~~, wherein only a Co compound is added as said M element compound.

31. The method for producing a ferrite magnet according to claim 28 ~~or~~
~~29~~, wherein a Co compound plus a Mn compound and/or a Ni compound
are added as said M element compound, the amount of said Mn element
being 0.4 atomic % or more when said M element compound is added.

32. The method for producing a ferrite magnet according to claim 28 ~~or~~
~~29~~, wherein a Ni compound and/or a Mn compound is added as said M
element compound, the amount of Mn element being 0.4 atomic % or more
when said M element compound is added.

33. The method for producing a ferrite magnet according to ~~any one of~~
claims ²⁸ ~~28-32~~, wherein an oxide or hydroxide of said R element and/or said
M element is added.

34. The method for producing a ferrite magnet according to ~~any one of~~
claims ²⁸ ~~28-33~~, wherein an iron compound is further added at a fine
pulverization step after calcination.

35. The method for producing a ferrite magnet according to claim 34,
wherein the amount of said iron compound ^{further added} ~~post-added~~ is 0.1-11 weight %,
on an iron element basis, per the total amount of iron.

36. The method for producing a ferrite magnet according to ~~any one of~~
claims ²⁸ ~~28-35~~, wherein said calcined powder before the post-addition has a
composition satisfying the condition of $5 \leq n \leq 6$.

37. A method for producing a ferrite magnet having a basic
composition represented by the following general formula:

$(A_{1-x}R_x)O \cdot n[(Fe_{1-y}M_y)_2O_3]$ by atomic ratio,

wherein A is Sr and/or Ba, R is at least one of rare earth elements including

Y, M is at least one element selected from the group consisting of Co, Mn,

Ni and Zn, and x, y and n are numbers meeting the following conditions:

$$0.01 \leq x \leq 0.4,$$

$$[x/(2.6n)] \leq y \leq [x/(1.6n)], \text{ and}$$

$$5 \leq n \leq 6,$$

- 5 said ferrite magnet substantially having a magnetoplumbite-type crystal structure, said method comprising the steps of adding a compound of the R element and/or the M element at a percentage of more than 0 atomic % and 80 atomic % or less, on an element basis, at a step of uniformly mixing a compound of Sr and/or Ba with an iron compound; calcining the resultant
10 uniform mixture; adding the remaining amount of said compound of the R element and/or the M element to the resultant calcined powder at a pulverization step thereof; and sintering the resultant mixture.

- 2 38. The method for producing a ferrite magnet according to claim 1, wherein at least one of oxides or hydroxides of elements selected from the
15 group consisting of La, Nd, Pr and Ce is added as said R element compound.

- a 3 39. The method for producing a ferrite magnet according to claim 37 or
a 38, wherein only a Co compound is added as said M element compound.

- a 40. The method for producing a ferrite magnet according to claim 37 or
a 38, wherein a Co compound plus a Mn compound and/or a Ni compound
20 are added as said M element compound, the amount of said Mn element being 0.4 atomic % or more when said M element compound is added.

- a 41. The method for producing a ferrite magnet according to claim 37 or
a 38, wherein a Ni compound and/or a Mn compound is added as said M
25 element compound, the amount of said Mn element being 0.4 atomic % or

~~more when said M element compound is added.~~

4 ~~42.~~ The method for producing a ferrite magnet according to ~~any one of~~
~~claims 37-41~~, wherein an oxide or hydroxide of said R element and/or said
M element is added.

5 ~~43.~~ The method for producing a ferrite magnet according to ~~any one of~~
~~claims 37-42~~, wherein an iron compound is further added at a fine
pulverization step after calcination.

6 ~~44.~~ The method for producing a ferrite magnet according to claim ~~43~~,
wherein the amount of said iron compound ~~post-added~~ ^{further added} is 0.1-11 weight %, ⁵
on an iron element basis, per the total amount of iron.

7 ~~45.~~ The method for producing a ferrite magnet according to ~~any one of~~
~~claims 37-44~~, wherein said calcined powder before the post-addition has a
composition satisfying the condition of $5 \leq n \leq 6$.